THE GEOMYDOECUS (MALLOPHAGA: TRICHODECTIDAE) OF THE SOUTHEASTERN USA POCKET GOPHERS (RODENTIA: GEOMYIDAE)[1]

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ABSTRACT—Descriptions, illustrations, and distributions are given for *Geomydoecus scleritus* (McGregor) and the new species, *G. mobilensis* (type-host: *Geomys pinetis mobilensis*). These represent the only lice known to occur on the *Geomys* of the southeastern USA.

Price and Emerson (1971), in a revision of the genus *Geomydoecus* Ewing, 1929, recognized the single louse species, *G. scleritus* (McGregor, 1917), as occurring on all 8 species and subspecies of the southeastern USA pocket gophers. Since then I have studied additional material from these hosts and have concluded that a new species is represented by those lice from *Geomys pinetis mobilensis* Merriam. It is my intent here to redescribe and illustrate *G. scleritus* and then to describe the closely-related new species.

In the following descriptions, measured or counted characters are followed by the minimum and maximum observed values, and, in parentheses, the sample size, mean, and standard deviation. All measurements are in millimeters.

I would like to thank Mr. Ronald A. Hellenthal, Department of Entomology, Fisheries, and Wildlife, for making his computer programs available to me and for aiding in the statistical analysis of my material; the University of Minnesota University Computer Center for a computer time grant and the use of its facilities; and Dr. K. C. Emerson, Arlington, Virginia, for the loan of pertinent specimens.

Geomydoecus scleritus (McGregor)
Fig. 1–5

Male: Unknown.

Female: As in fig. 1. Head width, 0.40–0.45 ($37{:}0.432 \pm 0.0113$); head length, 0.28–0.32 ($36{:}0.303 \pm 0.0095$); submarginal and marginal temple setae (STS, MTS; fig. 2) each 0.025–0.035 long, with STS variably anterior to somewhat lateral of MTS. Prothorax width, 0.29–0.34 ($37{:}0.315 \pm 0.0118$). Metanotum with from $2 + 2$ very long setae each side, as shown in fig. 1, to $2 + 1$, $1 + 2$, or $1 + 1$. Tergal setae: I, 2; II, 10–14 ($37{:}12.3 \pm 0.87$); III, 16–20 ($37{:}17.8 \pm 1.04$); IV, 17–25 ($38{:}20.0 \pm 1.46$); V, 15–21 ($37{:}18.3 \pm 1.40$); VI, 13–18 ($38{:}15.6 \pm 1.48$); tergal and pleural setae on VII, 19–26 ($37{:}22.4 \pm 1.57$). Longest seta of medial 10 on tergite VI, 0.065–0.090 ($38{:}0.083 \pm 0.0054$) long; on tergite VII, 0.115–0.140 ($37{:}0.124 \pm 0.0059$), with 5–8 ($82{:}7.2 \pm 0.88$) of these longer than 0.10 (fig. 5) (41 specimens with 8,

[1] Paper No. 8505, Scientific Journal Series, Minnesota Agricultural Experiment Station, St. Paul, Minnesota 55101.

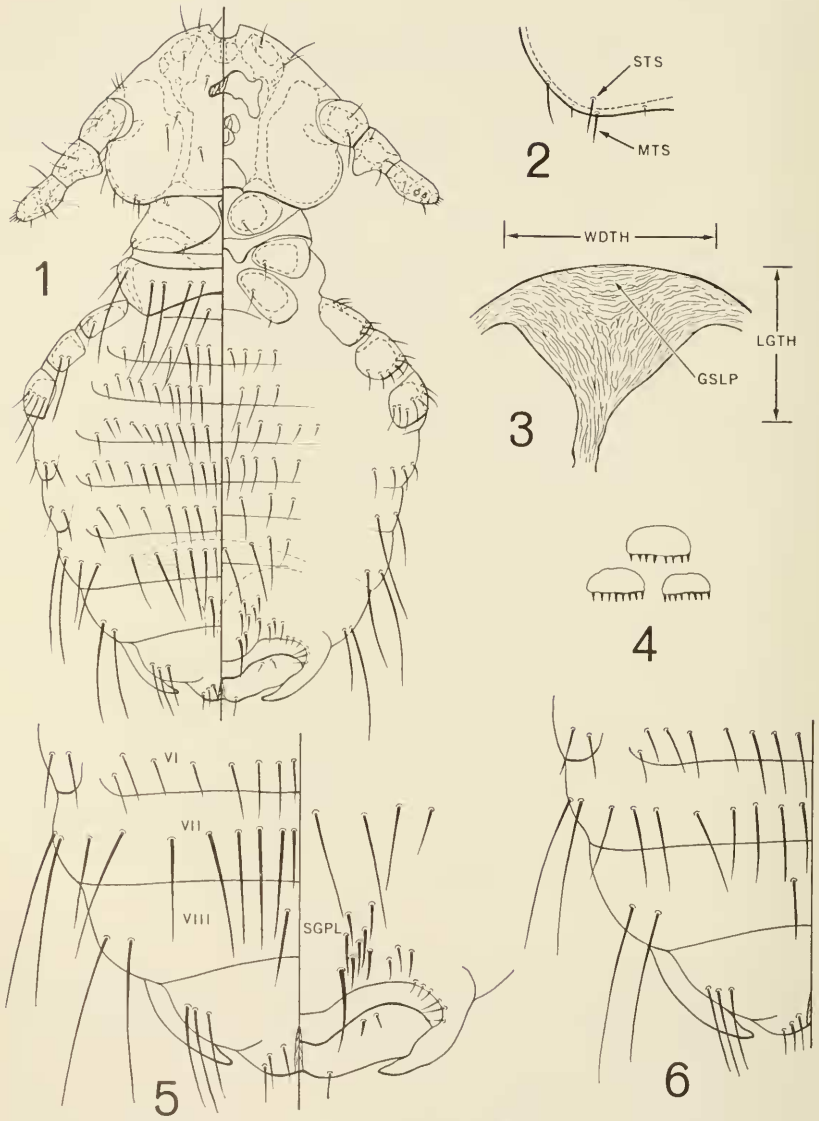

Fig. 1–5. Female *Geomydoecus scleritus* (McGregor). 1, dorsal ventral view (without legs). 2, temple margin. 3, genital chamber sac. 4, genital chamber particles. 5, dorsal ventral view of terminalia.
Fig. 6. Female *G. mobilensis*, n. sp., dorsal terminalia.

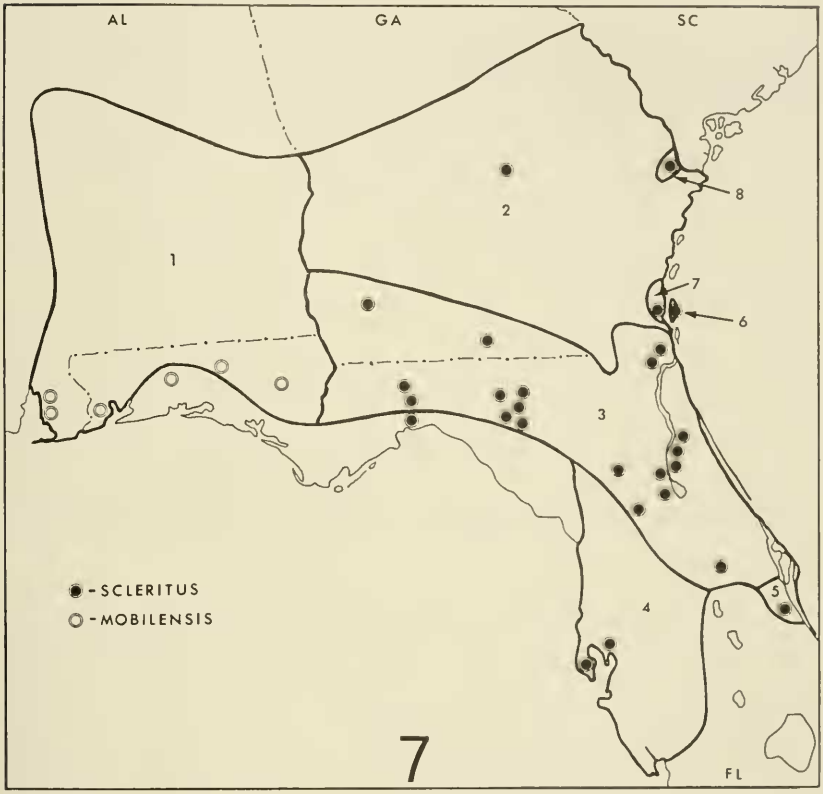

Fig. 7. Collections of *Geomydoecus scleritus* and *G. mobilensis* from the 8 taxa of southeastern USA pocket gophers—1) *Geomys pinetis mobilensis*, 2) *G. p. pinetis*, 3) *G. p. floridanus*, 4) *G. p. austrinus*, 5) *G. p. goffi*, 6) *G. cumberlandius*, 7) *G. colonus*, 8) *G. fontanelus*. Gopher ranges from Hall and Kelson (1959).

23 with 7, 15 with 6, 3 with 5). Longest seta of medial pair on tergite VIII, 0.065–0.100 (34:0.084 ± 0.0100). Last tergite with 3 setae close together each lateroposterior corner (fig. 5), subequal in length, outer seta 0.075–0.105 long, middle 0.075–0.120, inner 0.080–0.110. Sternal setae: II, 8–11 (38:8.7 ± 0.77); III, 6–11 (36:7.9 ± 1.18); IV, 7–13 (34:9.9 ± 1.28); V, 5–9 (31:7.7 ± 0.94); VI, 5–8 (33:6.9 ± 0.97); VII, 5–9 (35:6.4 ± 1.01). Subgenital plate (SGPL: fig. 5) with 16–24 (37:20.6 ± 2.06) total setae, with distribution and lengths as shown. Total body length, 1.09–1.27 (36:1.173 ± 0.0181). Genital sac (fig. 3) 0.18–0.23 wide, 0.11–0.18 long, with 7–14 weak posteriorly directed loops (GSLP: fig. 3); genital chamber particles indistinct, shaped much as in fig. 4.

Material examined (all females, with number of collections in parentheses following each locality): 6, *Geomys colonus* Bangs, Georgia—St. Marys (2); 25, *G. cumberlandius* Bangs, Georgia—Cumberland Island (3); 5, *G. fontanelus*

Sherman, Georgia—Savannah (1); 22, *G. pinetis austrinus* Bangs, Florida—Tampa (1), Belleair (4); 235, *G. p. floridanus*, Florida—Orlando (1), Satsuma (1), San Mateo (1), Welaka (3), Silver Springs (2), Ocala National Forest (1), Jacksonville (1), Oceanway (1), Day (1), Mayo (3), Ellaville (1), Tallahassee (7), Gainesville (2), Falmouth (5), Dowling Park (2), St. Marks (1), Wakulla (2), and Georgia—near Naylor (1), Newton (1); 23, *G. p. goffi* Sherman, Florida—Eau Gallie (6); 4, *G. p. pinetis* Rafinesque, Georgia—McRae (1).

Geomydoecus mobilensis Price, new species
Fig. 6

Male: Unknown.

Female: Much as for *G. scleritus*, except as follows. Head width, 0.40–0.44 (34:0.420 ± 0.0099); head length, 0.28–0.31 (34:0.292 ± 0.0076). Prothorax width, 0.28–0.33 (33:0.307 ± 0.0104). Tergal setae on VI, 15–21 (34: 17.8 ± 1.75); tergal and pleural setae on VII, 22–27 (34:24.1 ± 1.47). Longest seta of medial 10 on tergite VII, 0.085–0.115 (35:0.099 ± 0.0077), with only 0–5 (82:0.5 ± 0.93) of these longer than 0.10 (fig. 6) (53 specimens with 0, 22 with 1, 3 with 2, 2 with 3, 1 each with 4 or 5). Longest seta of medial pair on tergite VIII, 0.050–0.075 (33:0.063 ± 0.0064). Sternal setae: II, 7–10 (35:8.0 ± 0.64); III, 6–8 (34:7.0 ± 0.63); IV, 8–11 (31:9.1 ± 0.85); V, 7–10 (33:8.1 ± 0.68); VI, 7–9 (34:7.9 ± 0.55).

Discussion: Even though *G. mobilensis* is similar in most respects to *G. scleritus*, it has differences in setal lengths on tergites VII–VIII (fig. 6 vs fig. 5). The principal feature for separation is associated with the lengths of the medial 10 setae on tergite VII. With *G. mobilensis*, usually (75 of 82 specimens) 0–1 of these setae are longer than 0.10, but with *G. scleritus* (79 of 82 specimens) 6–8 are longer than 0.10. The longest seta of this group is also longer for *G. scleritus*. Since the 2 medial setae in this row are invariably less than 0.10, *G. scleritus* has the majority of all remaining setae over 0.10, and *G. mobilensis* has few, if any, setae this length. A comparison of character means by single classification analysis of variance indicates that, for most measurements, *G. scleritus* is somewhat larger than *G. mobilensis*. *G. scleritus* also has fewer setae on tergites VI–VII and sternite VI and more on sternites II–III than does *G. mobilensis*. A map (fig. 7) gives the locations of the known collections of these 2 species of lice.

Of almost 500 adult lice of these species which have been examined, none are males. This supports my belief that these species are parthenogenetic with males rare or absent.

Type-host: *Geomys pinetis mobilensis* Merriam.

Type-material (all females from type-host): Holotype, Point Clear, Baldwin Co., Alabama, 7 Jan. 1934, E. V. Komarek; in collection of National Museum of Natural History. Paratypes: 21, same data as holotype; 35, Fairhope, Baldwin Co., Alabama, 27 May 1948 (KU-27160) and 28 May 1948 (KU-27161), W. K. Clark; 22, Crestview, Walton Co., Florida, 2 June 1970, C. Jones (4423, 4424); 76, East

Pensacola Heights, Escambia Co., Florida, 22 Mar. 1928 (SD-7126) and 23 Mar. 1928 (SD-7128), F. F. Gander; 12, 6 mi. south Wausau, Washington Co., Florida, 3 May 1948, W. K. Clark (KU-27149); 16, De Funiak Springs, Walton Co., Florida, 26 June 1972 (USNM-348387, 348388).

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BOOK REVIEWS

AN INDEX TO BIOGRAPHICAL FRAGMENTS IN UNSPECIALIZED SCIENTIFIC JOURNALS. By E. Scott Barr. 1973. University of Alabama Press, University, Alabama. 294 pp. $12.50

This book is a new source-work in searching literature for references to persons active in or otherwise associated with the sciences, chiefly prior to 1920. The compiler, while a physicist at the University of Alabama, sought to assemble biographical data by scanning English language journals of a general nature rather than those specializing in individual sciences. The literature search was based on the following: American journals—American Journal of Science, 200 volumes, 1819–1920; Popular Science Monthly, 87 volumes, 1872–1915; Science, First series, 24 volumes, 1883–1894; Science, New series, 50 volumes, 1895–1919. British journals—Proceedings of the Edinburgh Royal Society, 40 volumes, 1832–1920; Proceedings of the Royal Society (London), 172 volumes, 1800–1905, Series A. 1905–1931–32, Series B. 1905–1932–33; Nature, 100 volumes, 1869–1918; Philosophical Magazine, 210 volumes, 1798–1902.

This survey yielded about 15,000 citations, covering some 7,700 individuals. The book lists the scientists alphabetically, together with the fields of scientific activity, years of birth and death (if known), countries of birth, and abbreviated references to the literature citations. In some cases supporting information was obtained from American Men of Science or similar source-works, though those references are not cited for individuals.

Inspection of the first 100 pages shows that 30 persons are listed as having entomology as a major field. It is clear that many others with biology, zoology or similar fields were also involved in entomology. There is no index to the individuals in particular specialties. Readers searching for biographical references to past entomologists may find this book useful as a supplement to more specialized sources such as Mathilde M. Carpenter's 2 parts of "Bibliography of biographies of entomologists" (Amer. Midl. Nat. 33(1):1–116, 1945; 50(2):257–346, 1953) and the several volumes comprising histories of entomology.

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